

Welcome

Co-Chairs Chris Christopher and Kevin Dayton had everyone introduce his or her self to Jerry Lenzi, Eastern Region Administrator. Jerry says he feels the WZSTF does important work. He talked about the importance of employees emphasizing safety in work zones, and especially stressed the prevention of backing up accidents. Jerry also spoke of the restructuring of the Headquarters Safety Office with more executive involvement and the creation of an advisory committee.

I-90 Slide Coordination – Chris Christopher

Chris talked about the excellent coordination involved in the November 6 rockslide on I-90, from getting Wilder Construction to the pass, to geologists on site, to VMS advertising the closure. The website was updated, and 511 was reworded so the pass information was first. The pass was reopened Monday November 7 with one lane in each direction; Smart Zone was relocated to the pass so that pictures of the site could be put out on the web. Idaho and Montana were also notified so messages could be placed at the borders giving drivers route options. This was also Dads Weekend at Washington State University so the City of Pullman had notices up in restaurants and VMS on the way out of town letting people know of the pass closure. Kerry Jorgenson, TMC Manager of South Central Region, did an excellent job coordinating. Discussion ensued regarding a contingency plan for future incidents on the pass, and what would happen if there were no electricity available to work devices. According to our Traffic Data Office, societal costs for the closed pass are estimated to be \$375,700 per day, with an estimated \$250 M a day in commerce going over the pass.

Washington State Patrol (WSP) as Work Zone Traffic Control – Frank Newboles

A work zone traffic control proposal has been drafted to go into Chapter 5 of the *Traffic Manual*. The proposal talks about WSP work zone enforcement and assistance, which may improve safety in work zones by controlling driver compliance. Rules and procedures for planning and obtaining traffic control enforcement and assistance are outlined, focusing on assignments with the WSP and local law enforcement, while working within existing region protocol. The draft outlines the policy, the program, considerations and procedures, strategies, and provides additional resources and guidelines in the appendices. The *Plans Preparation Manual*, the *Construction Manual* and the *Design Manual* will be updated to point to the *Traffic Manual* for guidance. Frank asked for feedback by November 23 on the draft.

Region Roundtable

Northwest Region – Pat Moylan talked about TEF Vehicles Lighting Standards and explained LED flashing lights on vehicles and arrow board signs are more economical to operate than strobe lights and can run all day using only ½ volt. LED flashing lights can run 24 hours with almost no draw on the battery, and they are comparable to halogen lights in brightness. LED are solid state and vibration proof. The down side seems to be that LED are more expensive (\$166 a piece for a light bar) and although LED's typically last longer than other lights, as they begin to wear out they gradually lose their visibility and grow dim instead of just burning out like a normal light would. The mini light bars are very visible in the daylight but some think they are too bright for night use. South Central Region is also testing LED arrow boards.

Bonnie Nau talked about a cross over accident near Smokey Point where a bus lost control and went through a temporary barrier and guardrail, to be stopped by an additional barrier. The barriers worked exactly as they should have, stopping the bus and keeping it from going into on coming traffic. Incident response, maintenance and construction crews detoured traffic onto an over pass and the lanes were opened in less than two hours. Phil Fordyce talked about the success story of the Second Street Bridge construction in Marysville. Dawn McIntosh talked about the widening of a single lane roundabout on Lake Sammamish Way, trying to improve traffic flow especially for busses and large trucks. The right turn lanes had to be sacrificed for sidewalk improvements for schools and a daycare center, which in turn caused backups. Ramp metering had to be installed to regulate the queue during peak morning hours. In retrospect this was an experimental roundabout and not a good location for one, there was not adequate room to operate it efficiently and there was a pedestrian signal too close. It was also revealed that traffic data had not been updated right before construction.

Deleted: of the construction

Eastern Region – Ralph Robertson talked about a rural roundabout on Hwy 206 that originally had a lot of public resistance even though it was a high accident location. Design flaws in the traffic control plans were found as they went through the building process. Roundabouts are very difficult to construct under traffic, traffic control is required on all four quadrants when any work is done. Luckily detours were easily accessible. Now that it is complete, the operation is working well. Steve Haapala of Olympic Region said they found some of the same traffic control issues when building a round about, Bonnie cautioned routing drivers the wrong way through a roundabout during construction since it not a good idea to reinforce wrong way behavior. Marty Weed, HQ Traffic Office, said that he has worked with roundabouts for the last ten years and he doesn't believe that any one standard works well in all roundabouts since they are all different. Chris emphasized the need for regions to share lessons learned in roundabout construction and traffic control. Frank Newboles, HQ Traffic Office, pointed out the technical team is working on some guidance not only for construction but maintenance of roundabouts including paving and snow plowing.

Washington State Patrol in a Work Zone Media Event – Lisa Murdock

With five severe accidents at the beginning of the road construction season, WSDOT and WSP discussed how to change driver behavior in work zones. The public was made aware that troopers would be in work zones, but the location was not publicized. So far troopers have concentrated on two areas, I-5 in Smokey Point and SR16. Although 96 citations were issued at Smokey Point and 75 at the SR 16 site, some troopers were uncomfortable giving out tickets in work zones if a sign was not posted saying "fines double in work zones." Discussion ensued as to the necessity of posting the sign. It is important for WSDOT to communicate to the local WSP captain or even the chief that double fines are a law and troopers need to enforce regardless of signing. WSDOT needs to find out if we have the sign in one work zone and not another, could a judge throw out a case where the sign was not present? The question was asked how do we measure the success of the Emphasis Patrol program? Short term would be the number of contacts made; the long term would be the number of incidents. Public education is important; Tom Lenberg says fairs are a good venue for this type of advertisement. Also, Greg Biffle, NASCAR driver, has offered to wave his fee and do a public relations spot for WSDOT.

Region Round Table (continued)

NC Region – Kirk Berg talked about latitude in work zone signing in regard to sign stands. Kirk also talked about incidents on projects including a contractor working on a ramp one Saturday and Sunday without letting WSDOT know and since it was the same weekend as

WSU and The Gorge events, an eight-mile backup on I-90 resulted. This reinforces the need to keep lines of communication with contractors open. Kirk also talked about using temporary signals whenever feasible when implementing detours, and installing cameras on some projects so traffic can be monitored and traffic signals can be changed as needed.

Southwest Region – Chris Tams stressed the positive impact the WSP has had on one of their mobile operations; the WSP presence has greatly reduced the number of incidence. Chris suggested this area might be a good place to put one of the Emphasis Patrols. Chris also talked about some work zone issues including a maintenance sweeper being hit and a county bridge widening project that had a low clearance issue with temporary false work over I-205. As part of the contract, over-height warning detectors were installed yet they still had problems with over-height trucks coming through the work area. The group agreed that bridge false work routinely has problems regardless of signing and devices.

Federal Highway Administration (FHWA) – Cathy Nicholas talked about the State Agencies Work Zone Final Rule Implementation Guide Web Conference hosted by FHWA. Frank Newboles, Scott Zeller, Marty Weed, Dave Mounts, Mike Horton and Cathy attended. After the web conference there was time spent discussing how WSDOT would meet the October 2007 deadline. It was decided that a small working group would be a great way to go forward, with representation from the design and construction offices as well. The team will meet quarterly to update each other on how the implementation efforts are going. Cathy talked about educating people regarding the new rule, and mentioned that the WZSTF could be an oversight/review committee for this endeavor. Cathy will report on pavement markings at the next meeting.

Eastern Region – Ralph Robertson said that Eastern Region had a lot more exposure to night work this past season on I-90 and two ITS jobs, he credits the lack of “close calls” to the high visibility gear. Ralph also talked about the excellent coordination and cooperation his region has with the WSP. Ralph explained how crucial advance planning and public education are to extensive lane closures on an upcoming project like the overhead viaduct through Spokane this next season.

South Central Region – Rick Gifford talked about the fatality that occurred in a work zone on Hwy 82. Traffic was backed up due to a work zone and a car swerving at the last minute to avoid hitting another vehicle plowed into the back of a semi, killing the car’s passenger. Lane closures and proper signing were in effect. Frank said there are some techniques used in other states that we may want to include in our *Traffic Control Guidelines*. Mike O’Neil says that with as many distractions that drivers have, temporary rumble strips in work zones may help to get a driver’s attention. Rick Gifford also talked about a spraying vehicle that was doing everything right, and was still hit in the rear. Tom Lenberg talked about raising the safety bar, and about anticipating worst-case scenarios. He spoke about the importance of addressing issues at safety meetings before incidents happen. Tom also pointed out that the TMCs can be a great resource during an incident; they contact those who need to know.

Olympic Region – Amy Revis said that an I-5 panel replacement project was supposed to be a staged project of multiple nightly lane closures but the region ended up accepting a proposal by the contractor to do extended lane closures and it was very successful. Phil Fordyce said they have discovered that during a full closure much more can be accomplished than using lane closures. Being aggressive with contractors on such ideas as consolidated work zones, quicker setting concrete and night closures can speed up projects. Steve Haapala talked about designers being aware of the condition of existing roadway

hardware when they plan to use it temporarily during construction. The region had planned on using existing concrete barrier during a temporary setup but found the barrier was in such poor condition they had to remove it and pay to have new barrier brought to the job. On another note, Steve said that people in work zones always need to be alert, citing an incident where a vehicle drove the length of a closed lane up to the TMA because the cones at the beginning of the closure had been knocked down and the driver didn't know the lane was closed.

Lakeside Industries – Mike O'Neil talked about looking more closely at tasks that should not be done during night work, this was in regard to an employee that was struck by a tree he was falling at night. Mike says they have to work hard to convince the state they don't have to widen and pave at night especially on private jobs that intersect with state work. Utility companies and Asplund also prefer daytime lane closures to working at night. Mike pointed out that Lakeside really wants to have the WSP in their work zones, their crews feel much safer. When closing down a project for the season, Mike said it's important to leave the work site as safe as possible. Mike said to remember that for many drivers, the public perception is that all work crews are WSDOT.

Issue Tracking Forms – Chris Christopher

Each of the six current WZSTF issues was discussed:

- Vehicles Lighting Standards – the proposal was given to TEF and accepted, this issue is considered closed.
- Eliminating Ticket Takers on Pavers – Ralph Robertson will report at the February meeting, basically guidelines will be provided so that these methods may be used on select jobs.
- More Reflective Stop/Slow Paddles – a memo was written to Ted Trepanier, State Traffic Engineer, who agreed that this is a good idea and that guidelines will appear in the *Sign Manual*. The implementation plan is not yet developed.
- ADIEM Attenuators – the proposal is for the *Design Manual* to include guidance as to ADIEM Attenuator's use on sites of 45 mph or less. This issue is considered closed.
- WSP Agreement and Guidance – Frank is waiting for feedback from the regions, final guidance will be in Chapter 5 of the *Traffic Manual*.
- Statewide Region Work Zone Review Process – Frank will send a memo to the regions, outlining improvement opportunities.

Task Force Subcommittees

Oversight Subcommittee – Joel Amos, the new WSDOT Safety and Health Manager, first talked about fundamentals of the work place: identify, educate and limit exposure – that is reinforcing the concept of safety plans, knowing the hazard and limiting exposure to it. The Traffic Control Oversight Committee (TCOC), charged with the administrative oversight of flagger training and traffic control supervisor training (TCS), met in September and talked about the newly created Work Zone Safety Close Call Report, it is in draft form and Joel would like the WZSTF to review it. Joel also mentioned that the Washington State TCS has no reciprocity agreement with other states because at this time we feel we have the most advanced program and other state program do not meet our criteria. With the adoption of the MUTCD, high visibility apparel will be affected; WSDOT will meet with the Washington State Department of Labor and Industry (L&I) to talk about implementation. Dave Hamacher of the WSDOT Safety Office has sent a high visibility T-shirt out to be tested. Joel also talked about the Safety Policy Committee and the Advisory Safety Committee being launched by HQ to reinforce safety in the regions.

New Products Subcommittee – Marty Weed talked about the sign stand issue. There is occasionally a need to have a portable sign stand capable of mounting a construction sign seven feet above the pavement. The issue has been that temporary portable sign stands are typically constructed similar to homemade “Christmas tree stands”, and these do not meet NCHRP350 crash standards. Right now there are not many portable sign stands that are capable of holding a sign seven feet in the air. Marty talked with other states to see what they are using and came up with three possible candidates. WSDOT has been told by WSP that if the speed limit sign is not the standard seven-foot, law enforcement does not feel they have to stop speeders. More research will be made on the sign stand issue. Marty also talked about a new trailer-mounted attenuator that has been developed by a manufacturer to provide an option to the standard truck mounted attenuators. The device has not yet been submitted to the New Products committee for evaluation or to HQ Design office for approval in WSDOT.

Technical Subcommittee – Frank said the Technical Subcommittee had nothing to report at this time, but he wanted to talk about mounting red lights on vehicles in work zones, this cannot happen with the exception of an Incident Response vehicle responding to a life threatening issue in the work zone. Frank also had several FHWA brochures and pamphlets available.

Work Zone Construction Project Reviews Report – Frank Newboles and Marty Weed

The most frequent work zone reoccurring issues have been general housekeeping issues. Frank said he appreciated how cooperative everyone has been. This year Frank and Marty reviewed traffic control plans before they went to a site. During the course of the review they focused more on design than in the past, some project engineers attend and some do not. Once the review was done, the recommendations for the work site were followed up on. The report was broken out by region then summarized, the summary pointed out improvement opportunities and action items. It was suggested that the region create an action plan to fix the issue or determine if the problem is outside their control, i.e. a bad specification. The purpose of the review is to get a status check on the state of our work zones and learn from others experiences, disseminate information and gain improvements on future jobs. Frank is open to suggestions on how to improve the review process. Before the report goes to the Regional Administrators, it will be sent out one more time to get comments from all the regions to each issue noted. Frank will finalize the report by the end of the year.

ITS Work Zone Peer Exchange – Marty Weed and Amy Revis

Marty said one of the purposes of the conference was to brainstorm ITS issues in work zones nationwide. Many states have the same issues WSDOT does, including having ITS elements cut if there is a budget issue on a project. FHWA talked about products and innovations that have been implemented in some states, such as the Dynamic Lane Merge, variable speed limits, automated enforcement (Washington state is looking at this to see how well it works), and an ITS work zone contract and how to accomplish it. There were many good vendor presentations, and Amy and Marty looked at the new available products. Amy talked about a web based program similar to MapBlast that gives the driver alternate routes to a destination around construction (based on daily reports from contractors). Another project provided a printed construction guide telling the level of impact, whose project it is, and whether the project is a day or night project. Amy told about one project that used speed advising signs followed by VMS saying “114 citations issued, don’t be 115”. There is also a Dynamic Lane Merge system that tells people when and how to merge in an orderly fashion. It has a sensing unit which talks to VMS that says

“congestion ahead,” etc. The latter would call for in-road sensors or portable sensors, the permanent ones are more costly. Either system is capable of communicating with TMCs, and could be applicable to work zones. Kevin talked about finding a project in one of the regions that could be a pilot for the Dynamic Lane Merge system.

Hydro Blasting – Phil Fordyce

Phil showed two video clips of the Stripe Hog hydro blaster that removes the center lane striping and sucks up the water, leaving the road almost dry. It can service up to 7500 linear feet an hour, separating water from debris as it goes. The hydro blasters can cover a path 1 inch to 24 inches in a single pass with very little damage to the road surface, removing paint not asphalt. In Everett, the Stripe Right hydro blaster was used, it leaves the road so dry striping can almost be done right behind the removal. On both machines there is some ghosting, but very little. Since these systems are very costly they would only be used on select projects. Phil believes looking into the use of the hydro blaster is worth pursuing. It was suggested that WSDOT look to see what other states are doing.

The next WZSTF meeting will be February 23, 2006 in Olympic Region 9:00 am – 3:30 pm.